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EXAMINER
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HUSON, MONICA ANNE

ART UNIT	PAPER NUMBER
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1732

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	12/29/2006	PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

## Office Action Summary

**Application No.**

10/047,984

**Applicant(s)**

VON HAAS, GERNOT

**Examiner**

Monica A. Huson

**Art Unit**

1732

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 04 October 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-7 and 17-56 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-7 and 17-56 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 17 January 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
- ☒ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- ☐ Notice of Informal Patent Application
- ☐ Other: \_\_\_\_\_.

### **DETAILED ACTION**

This office action is in response to the Amendment filed 4 October 2006.

#### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 4, 6, 7, 19-23, 26, 31-36, 39, 44-46, and 50-56 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bielfeldt (U.S. Patent 5,538,676), in view of Luke et al. (U.S. Patent 3,915,075), further in view of Reiniger (U.S. Patent 4,933,125). Regarding Claim 1, Bielfeldt shows that it is known to carry out a method for the continuous manufacture of wood material boards having a textured surface on at least one side (Abstract), comprising forming a particle mat of a wood, treated with a binding agent, onto a continuously moving conveyor belt (Figure 1, elements 2, 5); introducing the mat between steel belts each circulating around one of an upper and lower frame part of a continuously operating press (Figure 1, elements 1, 2); and after the step of introducing the mat, curing the mat in the continuously operating press to form an endless wood material board by applying pressure and heat to the mat (Figure 1, element 1; Column 4, lines 37-39), wherein the continuously operating press comprises at least one endless metal mesh belt configured to circulate with a corresponding one of said steel belts (Figure 1, elements 2, 6, 14), wherein the metal mesh belt and the corresponding steel belt are configured to pass through an insulating tunnel, in a return run, to reduce heat loss by thermal radiation (Figure 1, elements 8, 11, 12, 13;

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Column 4, lines 29-38; It is interpreted that presses 12 and 13 create an insulating tunnel which reduce heat loss to the steel band.), wherein the metal mesh belt is configured to pass through a heating tunnel, which is separated from the corresponding steel belt (Figure 1, elements 8, 11). Bielfeldt does not show a specific material for his metal mesh belt which has a thermal conductivity considerably higher than that of the corresponding steel belt and having a thermal expansion coefficient approximately equal to that of the corresponding steel belt. Luke et al., hereafter "Luke," show that it is known to carry out a method of molding cellulose articles wherein the cellulose article is carried on a metal mesh belt comprising a material having a thermal conductivity considerably higher than that of steel and having a thermal expansion coefficient approximately equal to that of steel (Column 3, lines 1-4; metal mesh material = copper). Luke and Bielfeldt are combinable because they are concerned with a similar technical field, namely, methods of molding cellulose articles. It would have been prima facie obvious to one of ordinary skill in the art at the time the invention was made to use Luke's copper mesh belt for that in Bielfeldt's molding process in order to satisfy the desired relative thermal properties of the two belts. Furthermore, Bielfeldt does not explicitly teach keeping the mesh belt at a temperature at least 40°C higher than that of the steel belt. However, he teaches maintaining distinct temperatures for the steel belts and the mesh belt (Column 3, lines 12-15, 43-45; It is noted that unless the method is taking place in a very hot room, there would easily be a 40°C temperature difference between a 100°C mesh belt and a non-heated steel belt.). Therefore, absent unexpected results, it would have been prima facie obvious to one of ordinary skill in the art at the time the invention was made to keep the mesh belt 40°C warmer than the steel belt in order to promote optimal processing conditions for a specific molding material. Finally, Bielfeldt does not teach a specific pressure which is applied on the mat. Reiniger shows that it is known to carry out a method of making a wood-based mat wherein curing

of the mat comprises applying a specific pressure to the mat of at least 0.3 N/mm<sup>2</sup> during a first at least 80% of a pressing time (Column 10, lines 62-65). Bielfeldt and Reiniger are combinable because they are concerned with a similar technical field, namely, that of molding operations which yield wood-based composite mats. It would have been prima facie obvious to one of ordinary skill in the art at the time the invention was made to use Reiniger's specific pressure in Bielfeldt's molding process in order to obtain the desired thickness and density of the product.

Regarding Claim 4, Bielfeldt shows the process as claimed as discussed in the rejection of Claim 1 above, including teaching maintaining a mesh belt at a temperature of 100°C and does not show a heated steel belt (Column 3, lines 13-14; It is noted that unless the method is taking place in a very hot room, there could be a 80°C temperature difference between a 100°C mesh belt and a non-heated steel belt.). Therefore, absent unexpected results, it would have been prima facie obvious to one of ordinary skill in the art at the time the invention was made to keep the mesh belt 80°C warmer than the steel belt in order to promote optimal processing conditions for a specific molding material.

Regarding Claim 6, Bielfeldt shows the process as claimed as discussed in the rejection of Claim 1 above, including a method further comprising the step of spraying one or both face strata of the mat with water (Column 3, lines 6-7), meeting applicant's claim.

Regarding Claim 7, Bielfeldt shows the process as claimed as discussed in the rejection of Claim 1 above, including a method further comprising the step of preheating one or both face strata of the mat with steam (Column 3, lines 40-42), meeting applicant's claim.

Regarding Claim 19, Bielfeldt shows that it is known to carry out a method for the continuous manufacture of wood material boards having a textured surface on at least one side (Abstract), comprising forming a particle mat of a wood, treated with a binding agent, onto a continuously moving

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conveyor belt (Figure 1, elements 2, 5); introducing the mat between steel belts each circulating around one of an upper and lower frame part of a continuously operating press (Figure 1, elements 1, 2); and after the step of introducing the mat, curing the mat in the continuously operating press to form an endless wood material board by applying pressure and heat to the mat (Figure 1, element 1; Column 4, lines 37-39), wherein the continuously operating press comprises at least one endless metal mesh belt configured to circulate with a corresponding one of said steel belts and to travel with the mat (Figure 1, elements 2, 6, 14), wherein the metal mesh belt and the corresponding steel belt are configured to pass simultaneously through an insulating tunnel, in a return run, to reduce heat loss by thermal radiation (Figure 1, elements 8, 11, 12, 13; Column 4, lines 29-38; It is interpreted that presses 12 and 13 create an insulating tunnel which reduce heat loss to the steel band.). Bielfeldt does not show a specific material for his metal mesh belt which has a thermal conductivity considerably higher than that of the corresponding steel belt. Luke shows that it is known to carry out a method of molding cellulose articles wherein the cellulose article is carried on a metal mesh belt comprising a material having a thermal conductivity considerably higher than that of steel and having a thermal expansion coefficient approximately equal to that of steel (Column 3, lines 1-4; metal mesh material = copper). It would have been prima facie obvious to one of ordinary skill in the art at the time the invention was made to use Luke's copper mesh belt for that in Bielfeldt's molding process in order to satisfy the desired relative thermal properties of the two belts.

Regarding Claim 20, Bielfeldt shows the process as claimed as discussed in the rejection of Claim 19 above, but he does not show a specific material for his metal mesh belt which has a thermal expansion coefficient approximately equal to that of the corresponding steel belt. Luke shows that it is known to carry out a method of molding cellulose articles wherein the cellulose article is

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carried on a metal mesh belt comprising a material having a thermal conductivity considerably higher than that of steel and having a thermal expansion coefficient approximately equal to that of steel (Column 3, lines 1-4; metal mesh material = copper). It would have been prima facie obvious to one of ordinary skill in the art at the time the invention was made to use Luke's copper mesh belt for that in Bielfeldt's molding process in order to satisfy the desired relative thermal properties of the two belts.

Regarding Claim 21, Bielfeldt shows the process as claimed as discussed in the rejection of Claim 19 above, including a method wherein the metal mesh belt is configured to pass through a heating tunnel, which is separated from the corresponding steel belt (Figure 1, elements 8, 11), meeting applicant's claim.

Regarding Claim 22, Bielfeldt shows the process as claimed as discussed in the rejection of Claim 21 above, but he does not explicitly teach keeping the mesh belt at a temperature at least 40°C higher than that of the steel belt. However, he teaches maintaining distinct temperatures for the steel belts and the mesh belt (Column 3, lines 12-15, 43-45; It is noted that unless the method is taking place in a very hot room, there would easily be a 40°C temperature difference between a 100°C mesh belt and a non-heated steel belt.). Therefore, absent unexpected results, it would have been prima facie obvious to one of ordinary skill in the art at the time the invention was made to keep the mesh belt 40°C warmer than the steel belt in order to promote optimal processing conditions for a specific molding material.

Regarding Claim 23, Bielfeldt shows the process as claimed as discussed in the rejection of Claim 22 above, including teaching maintaining a mesh belt at a temperature of 100°C and does not show a heated steel belt (Column 3, lines 13-14; It is noted that unless the method is taking place in a very hot room, there could be a 80°C temperature difference between a 100°C mesh belt and a non-heated steel belt.). Therefore, absent unexpected results, it would

have been prima facie obvious to one of ordinary skill in the art at the time the invention was made to keep the mesh belt 80°C warmer than the steel belt in order to promote optimal processing conditions for a specific molding material.

Regarding Claim 26, Bielfeldt shows the process as claimed as discussed in the rejection of Claim 19 above, but he does not teach a specific pressure which is applied on the mat. Reiniger shows that it is known to carry out a method of making a wood-based mat wherein curing of the mat comprises applying a specific pressure to the mat of at least 0.3 N/mm<sup>2</sup> during a first at least 80% of a pressing time (Column 10, lines 62-65). It would have been prima facie obvious to one of ordinary skill in the art at the time the invention was made to use Reiniger's specific pressure in Bielfeldt's molding process in order to obtain the desired thickness and density of the product.

Regarding Claim 31, Bielfeldt shows that it is known to carry out a method for the continuous manufacture of wood material boards having a textured surface on at least one side (Abstract), comprising forming a particle mat of a wood, treated with a binding agent, onto a continuously moving conveyor belt (Figure 1, elements 2, 5); introducing the mat between steel belts each circulating around one of an upper and lower frame part of a continuously operating press (Figure 1, elements 1, 2); and after the step of introducing the mat, curing the mat in the continuously operating press to form an endless wood material board by applying pressure and heat to the mat (Figure 1, element 1; Column 4, lines 37-39), wherein the continuously operating press comprises at least one endless metal mesh belt configured to circulate with a corresponding one of said steel belts and to travel with the mat (Figure 1, elements 2, 6, 14), wherein the metal mesh belt texturizes a surface of the mat (Column 4, lines 51-58). Bielfeldt does not show a specific material for his metal mesh belt which has a thermal conductivity considerably higher than that of the corresponding steel belt and a thermal expansion coefficient within the range of steel. Luke shows that it is known to carry out a method of



molding cellulose articles wherein the cellulose article is carried on a metal mesh belt comprising a material having a thermal conductivity considerably higher than that of steel and having a thermal expansion coefficient approximately equal to that of steel (Column 3, lines 1-4; metal mesh material = copper). It would have been prima facie obvious to one of ordinary skill in the art at the time the invention was made to use Luke's copper mesh belt for that in Bielfeldt's molding process in order to satisfy the desired relative thermal properties of the two belts.

Regarding Claim 32, Bielfeldt shows the process as claimed as discussed in the rejection of Claim 31 above, but he does not show a specific material for his metal mesh belt. Luke shows that it is known to carry out a method of molding cellulose articles wherein the cellulose article is carried on a metal mesh belt comprising a material having a thermal expansion coefficient approximately  $16.5 \times 10^{-6}/^{\circ}\text{C}$  (Column 3, lines 1-4; metal mesh material = copper). It would have been prima facie obvious to one of ordinary skill in the art at the time the invention was made to use Luke's copper mesh belt for that in Bielfeldt's molding process in order to satisfy the desired relative thermal properties of the two belts.

Regarding Claim 33, Bielfeldt shows the process as claimed as discussed in the rejection of Claim 31 above, including a method wherein the metal mesh belt and the corresponding steel belt are configured to pass through an insulating tunnel, in a return run, to reduce heat loss by thermal radiation (Figure 1, elements 8, 11, 12, 13; Column 4, lines 29-38; It is interpreted that presses 12 and 13 create an insulating tunnel which reduce heat loss to the steel band.), meeting applicant's claim.

Regarding Claim 34, Bielfeldt shows the process as claimed as discussed in the rejection of Claim 31 above, including a method wherein the metal mesh belt is configured to pass through a heating tunnel, which is separated from

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the corresponding steel belt (Figure 1, elements 8, 11), meeting applicant's claim.

Regarding Claim 35, Bielfeldt shows the process as claimed as discussed in the rejection of Claim 34 above, but he does not explicitly teach keeping the mesh belt at a temperature at least 40°C higher than that of the steel belt. However, he teaches maintaining distinct temperatures for the steel belts and the mesh belt (Column 3, lines 12-15, 43-45; It is noted that unless the method is taking place in a very hot room, there would easily be a 40°C temperature difference between a 100°C mesh belt and a non-heated steel belt.). Therefore, absent unexpected results, it would have been prima facie obvious to one of ordinary skill in the art at the time the invention was made to keep the mesh belt 40°C warmer than the steel belt in order to promote optimal processing conditions for a specific molding material.

Regarding Claim 36, Bielfeldt shows the process as claimed as discussed in the rejection of Claim 35 above, including teaching maintaining a mesh belt at a temperature of 100°C and does not show a heated steel belt (Column 3, lines 13-14; It is noted that unless the method is taking place in a very hot room, there could be a 80°C temperature difference between a 100°C mesh belt and a non-heated steel belt.). Therefore, absent unexpected results, it would have been prima facie obvious to one of ordinary skill in the art at the time the invention was made to keep the mesh belt 80°C warmer than the steel belt in order to promote optimal processing conditions for a specific molding material.

Regarding Claim 39, Bielfeldt shows the process as claimed as discussed in the rejection of Claim 31 above, but he does not teach a specific pressure which is applied on the mat. Reiniger shows that it is known to carry out a method of making a wood-based mat wherein curing of the mat comprises applying a specific pressure to the mat of at least 0.3 N/mm<sup>2</sup> during a first at least 80% of a pressing time (Column 10, lines 62-65). Bielfeldt and Reiniger are combinable because they are concerned with a similar technical field,

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namely, that of molding operations which yield wood-based composite mats. It would have been prima facie obvious to one of ordinary skill in the art at the time the invention was made to use Reiniger's specific pressure in Bielfeldt's molding process in order to obtain the desired thickness and density of the product.

Regarding Claims 44, 45, and 46, Bielfeldt shows the process as claimed as discussed in the rejection of Claims 1, 19, and 31, respectively, above, but he does not show a specific material for his metal mesh belt which has a thermal conductivity 70% greater than that of the corresponding steel belt. Luke shows that it is known to carry out a method of molding cellulose articles wherein the cellulose article is carried on a metal mesh belt comprising a material having a thermal conductivity considerably higher than that of steel and having a thermal expansion coefficient approximately equal to that of steel (Column 3, lines 1-4; metal mesh material = copper, copper has a thermal conductivity of at least 70% greater than steel- see attached values). It would have been prima facie obvious to one of ordinary skill in the art at the time the invention was made to use Luke's copper mesh belt for that in Bielfeldt's molding process in order to satisfy the desired relative thermal properties of the two belts.

Regarding Claim 50, Bielfeldt shows the process as claimed as discussed in the rejection of Claim 19 above, including showing a heating plate at Figure 1, element 7. As he clearly uses a heating plate, Bielfeldt does not show using a heating roll. However, it is widely recognized that using a heating plate or a heating roll would be functionally equivalent. It would have been prima facie obvious to one of ordinary skill in the art at the time the invention was made to use a heating roll in place of Bielfeldt's heating plate in order to accommodate particular space restrictions or apparatus dimensions.

Regarding Claims 51, 52, and 53, Bielfeldt shows the process as claimed as discussed in the rejection of Claims 1, 19, and 33, respectively, above,

including showing a method wherein the insulating tunnel is arranged outside of an area formed between the upper and lower frame parts of the continuously operating press (Column 4, lines 29-32; Figure 1, element 8, 11), meeting applicant's claim.

Regarding Claims 54, 55, and 56, Bielfeldt shows the process as claimed as discussed in the rejection of Claim 1, 21, and 34, respectively, above, including showing a method comprising the step of preheating the mat in a preheating device located upstream of the continuously operating press (Figure 1, element 7, 8), meeting applicant's claim.

Claims 2, 3, 5, 18, 24-25, 27-28, 30, 37-38, 40-41, and 43 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bielfeldt, Beck, and Reiniger as applied to claim 1 above, and further in view of Bielfeldt (U.S. Patent 5,762,980), hereafter "Bielfeldt '980".

Regarding Claim 2, Bielfeldt shows the process as claimed as discussed in the rejection of Claim 1 above, but he does not show measuring density. Bielfeldt '980 shows that it is known to carry out a method of making a wood-based mat further comprising the step of measuring a density profile of the formed endless wood material board, after the step of curing the mat, wherein the heating mechanism is configured to heat the metal mesh belt to a temperature profile that directly depends on said density profile (Column 7, lines 18-31). Bielfeldt '980 and Bielfeldt are combinable because they are concerned with a similar technical field, namely, that of molding methods which yield wood-based mats. It would have been prima facie obvious to one of ordinary skill in the art at the time the invention was made to follow Bielfeldt '980's measuring step during Bielfeldt's, Beck's and Reiniger's molding process in order to control the quality of the end product.

Regarding Claim 3, Bielfeldt shows the process as claimed as discussed in the rejection of Claim 1 above, but he does not show adjusting the density

profile. Bielfeldt '980 shows that it is known to carry out a method of making a wood-based mat further comprising the step adjusting a symmetrical or asymmetrical raw density profile in the formed endless wood material board, by adjusting a heat input into the side of the mat which is to be textured (Column 7, lines 18-42). It would have been prima facie obvious to one of ordinary skill in the art at the time the invention was made to follow Bielfeldt '980's adjusting step during Bielfeldt's, Beck's, and Reiniger's molding process in order to control the quality of the end product.

Regarding Claim 5, Bielfeldt shows the process as claimed as discussed in the rejection of Claim 1 above, but he does not show a specific moisture content of the mat. Bielfeldt '980 shows that it is known to carry out a method of making a wood-based mat wherein said step of introducing the mat comprises introducing the mat with a moisture content of less than or equal to approximately 9 weight percent (Column 4, lines 1-6). It would have been prima facie obvious to one of ordinary skill in the art at the time the invention was made to use Bielfeldt '980's moisture level for the mat in Bielfeldt's, Beck's, and Reiniger's molding process in order to obtain a desired moisture level in the final product.

Regarding Claim 18, Bielfeldt shows the process as claimed as discussed in the rejection of Claim 1 above, including a method further comprising cleaning the metal mesh belt (Column 7, lines 50-52), meeting applicant's claim.

Regarding Claim 24, Bielfeldt shows the process as claimed as discussed in the rejection of Claim 21 above, but he does not show measuring density. Bielfeldt '980 shows that it is known to carry out a method of making a wood-based mat further comprising the step of measuring a density profile of the formed endless wood material board (Column 7, lines 18-31). It would have been prima facie obvious to one of ordinary skill in the art at the time the invention was made to follow Bielfeldt '980's measuring step during Bielfeldt's,

Beck's and Reiniger's molding process in order to control the quality of the end product.

Regarding Claim 25, Bielfeldt shows the process as claimed as discussed in the rejection of Claim 24 above, but he does not show measuring density. Bielfeldt '980 shows that it is known to carry out a method wherein the heating mechanism is configured to heat the metal mesh belt to a temperature profile that directly depends on said density profile (Column 7, lines 18-31). It would have been prima facie obvious to one of ordinary skill in the art at the time the invention was made to follow Bielfeldt '980's measuring step during Bielfeldt's, Beck's and Reiniger's molding process in order to control the quality of the end product.

Regarding Claim 27, Bielfeldt shows the process as claimed as discussed in the rejection of Claim 19 above, but he does not show adjusting the density profile. Bielfeldt '980 shows that it is known to carry out a method of making a wood-based mat further comprising the step adjusting a symmetrical or asymmetrical raw density profile in the formed endless wood material board, by adjusting a heat input into the side of the mat which is to be textured (Column 7, lines 18-42). It would have been prima facie obvious to one of ordinary skill in the art at the time the invention was made to follow Bielfeldt '980's adjusting step during Bielfeldt's, Beck's, and Reiniger's molding process in order to control the quality of the end product.

Regarding Claim 28, Bielfeldt shows the process as claimed as discussed in the rejection of Claim 19 above, but he does not show a specific moisture content of the mat. Bielfeldt '980 shows that it is known to carry out a method of making a wood-based mat wherein said step of introducing the mat comprises introducing the mat with a moisture content of less than or equal to approximately 9 weight percent (Column 4, lines 1-6). It would have been prima facie obvious to one of ordinary skill in the art at the time the invention was made to use Bielfeldt '980's moisture level for the mat in Bielfeldt's, Beck's,

and Reiniger's molding process in order to obtain a desired moisture level in the final product.

Regarding Claim 30, Bielfeldt shows the process as claimed as discussed in the rejection of Claim 19 above, including a method further comprising cleaning the metal mesh belt (Column 7, lines 50-52), meeting applicant's claim.

Regarding Claim 37, Bielfeldt shows the process as claimed as discussed in the rejection of Claim 34 above, but he does not show measuring density. Bielfeldt '980 shows that it is known to carry out a method of making a wood-based mat further comprising the step of measuring a density profile of the formed endless wood material board (Column 7, lines 18-31). It would have been prima facie obvious to one of ordinary skill in the art at the time the invention was made to follow Bielfeldt '980's measuring step during Bielfeldt's, Beck's and Reiniger's molding process in order to control the quality of the end product.

Regarding Claim 38, Bielfeldt shows the process as claimed as discussed in the rejection of Claim 37 above, but he does not show measuring density. Bielfeldt '980 shows that it is known to carry out a method wherein the heating mechanism is configured to heat the metal mesh belt to a temperature profile that directly depends on said density profile (Column 7, lines 18-31). It would have been prima facie obvious to one of ordinary skill in the art at the time the invention was made to follow Bielfeldt '980's measuring step during Bielfeldt's, Beck's and Reiniger's molding process in order to control the quality of the end product.

Regarding Claim 40, Bielfeldt shows the process as claimed as discussed in the rejection of Claim 31 above, but he does not show adjusting the density profile. Bielfeldt '980 shows that it is known to carry out a method of making a wood-based mat further comprising the step adjusting a symmetrical or asymmetrical raw density profile in the formed endless wood material board, by

adjusting a heat input into the side of the mat which is to be textured (Column 7, lines 18-42). It would have been prima facie obvious to one of ordinary skill in the art at the time the invention was made to follow Bielfeldt '980's adjusting step during Bielfeldt's, Beck's, and Reiniger's molding process in order to control the quality of the end product.

Regarding Claim 41, Bielfeldt shows the process as claimed as discussed in the rejection of Claim 31 above, but he does not show a specific moisture content of the mat. Bielfeldt '980 shows that it is known to carry out a method of making a wood-based mat wherein said step of introducing the mat comprises introducing the mat with a moisture content of less than or equal to approximately 9 weight percent (Column 4, lines 1-6). It would have been prima facie obvious to one of ordinary skill in the art at the time the invention was made to use Bielfeldt '980's moisture level for the mat in Bielfeldt's, Beck's, and Reiniger's molding process in order to obtain a desired moisture level in the final product.

Regarding Claim 43, Bielfeldt shows the process as claimed as discussed in the rejection of Claim 31 above, including a method further comprising cleaning the metal mesh belt (Column 7, lines 50-52), meeting applicant's claim.

Claims 17, 29, and 42 rejected under 35 U.S.C. 103(a) as being unpatentable over Bielfeldt, Luke, and Reiniger, further in view of the Background section of the instant specification.

Regarding Claim 17, Bielfeldt shows the process as claimed as discussed in the rejection of Claim 1 above, but he does not show using a metal mesh belt that comprises at least two materials. The instant specification's background section states that it is known to use a high alloy stainless steel for a mesh belt material (Page 4, lines 1-2). It would have been prima facie obvious to one of ordinary skill in the art at the time the invention was made to use a mesh belt



with at least two materials during Bielfeldt's molding process in order to satisfy the desired relative thermal properties of the two belts.

Regarding Claim 29, Bielfeldt shows the process as claimed as discussed in the rejection of Claim 19 above, but he does not show using a metal mesh belt that comprises at least two materials. The instant specification's background section states that it is known to use a high alloy stainless steel for a mesh belt material (Page 4, lines 1-2). It would have been prima facie obvious to one of ordinary skill in the art at the time the invention was made to use a mesh belt with at least two materials during Bielfeldt's molding process in order to satisfy the desired relative thermal properties of the two belts.

Regarding Claim 42, Bielfeldt shows the process as claimed as discussed in the rejection of Claim 31 above, but he does not show using a metal mesh belt that comprises at least two materials. The instant specification's background section states that it is known to use a high alloy stainless steel for a mesh belt material (Page 4, lines 1-2). It would have been prima facie obvious to one of ordinary skill in the art at the time the invention was made to use a mesh belt with at least two materials during Bielfeldt's molding process in order to satisfy the desired relative thermal properties of the two belts.

Claims 47-49 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bielfeldt, Luke, Reiniger, and the Background section of the instant specification, further in view of Froese et al. (U.S. Patent 3,007,320). Bielfeldt shows the process as claimed as discussed in the rejection of Claims 17, 29, and 42, respectively, above, but he does not specify the material for his metal mesh belt. Froese et al., hereafter "Froese," show that it is known to carry out a method wherein a metal mesh belt comprises stainless steel (Column 7, lines 11-17; It is being interpreted that stainless steel would include a cast steel.). Froese and Bielfeldt are combinable because they are concerned with a similar technical field, namely, methods of molding continuous articles. It would have

been prima facie obvious to one of ordinary skill in the art at the time the invention was made to use Froese's specific metal mesh belt material during Bielfeldt's molding process in order to satisfy the desired relative thermal properties of the belt.

### ***Response to Arguments***

With regard to claims 1-7 and 17-43, applicant's arguments filed 4 October 2006 have been fully considered but they are not persuasive.

Applicant contends that Bielfeldt does not show the instant claims because he does not show an insulating tunnel. This is not persuasive because Bielfeldt clearly discusses using an insulating tunnel at Column 4, lines 29-32.

Applicant contends that Bielfeldt does not show the instant claims because there was no motivation to heat the metal mesh belt to a temperature that is 40°C higher than the temperature of the steel belt. This is not persuasive because based on Bielfeldt's disclosure, it is implicit that this temperature difference would exist. It is noted that unless the method is taking place in a very hot room, there would easily be a 40°C temperature difference between a 100°C mesh belt and a non-heated steel belt.

Applicant contends that Luke does not show the instant claims because Luke's belt does not correspond with a steel belt. This is not persuasive as Luke was merely cited to show materials useful for metal mesh belts which act as conveyors. It is maintained that Luke's disclosure is properly combinable with the teachings of Bielfeldt and show the relevant part of the claimed invention.

Applicant contends that Reiniger does not show the instant claims because Reiniger does not show a metal mesh belt with the claimed properties and does not cure the alleged deficiencies of Bielfeldt and Luke. This is not persuasive because Reiniger was not cited to show these limitations, and it is

maintained that Bielfeldt, Luke, and Reiniger combine properly to show the instant claims.

Applicant contends that Luke does not show the instant claims because his process is used to produce plastic articles, not wood articles. This is not persuasive because Luke was cited to show a material for a metal mesh belt. There is no indication that Luke's metal mesh belt would be inoperable when applied to wood board processing environments.

Applicant contends that the Background Section of the specification does not disclose using two materials for a metal mesh belt. This is not persuasive because the Background Section clearly discloses that it is known to use stainless steel as a material for mesh belts. Stainless steel is known to be an alloy of several metals, therefore meeting the claimed limitation that the mesh belt must be made of two materials.

Applicant's arguments with respect to claims 44-56 have been considered but are moot in view of the new ground(s) of rejection.

### **Conclusion**

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In

no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Monica A. Huson whose telephone number is 571-272-1198. The examiner can normally be reached on Monday-Friday 7:30am-4:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Christina Johnson can be reached on 571-272-1176. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Monica A Huson

December 20, 2006



CHRISTINA JOHNSON  
SUPERVISORY PATENT EXAMINER  
12/21/06